THE

# AMERICAN MEDICAL INTELLIGENCER.

Vol. II. July 16, 1838. No. 8.

## Art. I.—CASE OF POISONING BY ARSENIC.

BY RICHARD H. THOMAS, M. D., OF BALTIMORE.

*Case, in which it was believed that twenty grains of Arsenic had been taken, relieved by the Hydrated Peroxide of Iron, administered six hours after the poison was swallowed.*

Baltimore, 7th mo. 4, 1838.

6th mo. 1st, 1838, 8½ A. M., I saw Samuel Biddle, a robust man, about forty years of age, who told me that at 3 o'clock that morning he had mixed a powder in dry sugar and swallowed it for calomel; he left home immediately for his place of work, and whilst walking along—say in about fifteen minutes—was seized with a peculiar burning pain in his stomach, which induced him to believe that he had taken arsenic instead of calomel, as he remembered that he had in his chest two papers—one of twenty grains of arsenic, the other twenty grains of calomel. His suspicions were confirmed upon reaching his lodgings, when he found the paper of calomel properly labeled. This he took at once in a little dry sugar, and waited until daylight before he sent for me. He has had violent colic pains; some cramps in the lower extremities; no vomiting or purging. There is now a burning pain in the stomach; a tender epigastrium; white tongue, and corded pulse. I felt at first inclined to think he had been mistaken, and that he was labouring under gastritis. I bled him and ordered a sinapism. Upon questioning him more closely, and the symptoms increasing, I thought it would be safest to treat him as if the facts were ascertained.

In half an hour, by the kindness of my friend, Professor Fisher, of the University of Maryland, I was enabled to give him the hydrated peroxide of iron.

Dr. Fisher saw him with me at 9 o'clock, all the symptoms had increased; thirst, burning pain; epigastrium exquisitely tender. We gave him half a fluid ounce of the hydrate, which was in the wet state, and about the consistence of thick cream, in a tumbler of cool water, and directed the dose to be repeated every ten or fifteen minutes, in two ounces of water. A large dose of magnesia was also given, to be repeated in two hours.

12 A. M. The pain and burning in the stomach are much lessened—seem transferred to the bowels, which are tender to pressure. Continue the medicines.

4 P. M. Much relieved in every respect; has had several large evacuations from the bowels.

7 P. M. Still better; bowels freely purged; has swallowed eight ounces of the suspended hydrate, and three or four doses of magnesia.

Next morning, though weak, he seemed to be free from disease, and next day sat up, and had no bad symptom afterward.

Such is the case as it occurred; whether it be a fair test of the virtues of the peroxide as an antidote for arsenic, I leave the reader to judge. The

patient is a respectable man, and entitled to credit; he is positive as to the facts. The length of time—six hours—before any very severe symptoms supervened, and before the antidote was administered, at first caused me to think that he might himself have been deceived. Professor Von Specz, of Vienna, however, asserts, "That a dram of arsenic in powder does not produce its deadly effects on the system in less than six or eight hours, while the same quantity dissolved in warm water destroys life in a much shorter time." In the present instance, it was swallowed in a dry state, covered with sugar. The prompt relief which followed the exhibition of the peroxide is also confirmatory of the impression that the poison was really taken.

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## Art. II.—PHILADELPHIA HOSPITAL (BLOCKLEY).

### CLINIQUE OF DR. DUNGLISON.

1.—*Case of Scrophulosis—Morbus Brightii, General Dropsy.* Reported by Alexander M. Vedder, A. M., of New York, Senior Resident Physician.

Mary Taylor, æt. 12, entered the women's medical ward June 12th, 1838. Was in the surgical ward a year since with inflammation of the conjunctiva. Had effusion into the cellular tissue in April, 1838, but when it commenced is not known. For several months has had a swollen face and discharge from one of the ears. Says she has not had scarlet fever.

Present state, June 13th. Very light complexion; emaciated; prefers lying on the right side; face œdematous; left side more swollen than the right; lips thick and tumid, chapped; eyes partially closed by the œdema; chronic inflammation of the conjunctiva; cicatrix, and ulcer on the cornea of the right eye; left ear discharges a reddish, sanious matter; no œdema of upper extremities; abdomen distended, but gaseous on percussion; effusion inconsiderable; lower extremities much infiltrated and pit on pressure.

*Heart.*—Action regular; sounds clear; impulse moderate; no dyspnœa; no pain in the abdomen except in the right and left lumbar regions; firm pressure there produces deep-seated pain; pressure posteriorly in the region of kidney painful also; *not* elsewhere.

Slept well; appetite good; no urinary excretion for eighteen hours; no evacuation from the bowels; no sweating; skin cool, dry; pulse 90, feeble and small; urine not tested.

*Prescription.*—Good diet and the following mixture:—Baccar. juniperi ℥ss.; potassæ bitart. ℥i; Infunde in aquæ Oi.; sumat f. ℥iv. ter die.

June 13th, P. M. Nitric acid added to the urine gives a copious albuminous deposit.

June 17th. Skin of face of a bluish white colour; œdema of face and limbs slightly diminished; effusion of the abdomen as before. Seems more lively than at entrance; strength increased; feels better; sleeps well; no appetite; great thirst; tongue glossy, and of a pale red; left ear continues to discharge copiously a sanious matter; complains but little of pain in the ear; sweating at times; skin now dry and cool; six to eight evacuations in the twenty-four hours, no blood in them; urine, about a pint in the same time—coagulates by the addition of nitric acid and the application of heat; no pain in the abdomen, except in the region of the kidneys; pulse 100, small. Takes her medicine reluctantly.

*Prescription.*—Continuetur infusum baccarum juniperi et bitrartratis potassæ. R. Pul. digitalis; scillæ aa. gr. ss.; fiat pilula ter die sumenda.

June 19th. Feels better, sleeps all night and during the greater part of the day; appetite bad; thirst continues; skin dry; temperature about natural; no sweating; tongue pale red, shining; œdema of face as yesterday;

discharge from the ear continues—also from behind the ear, where the bone is carious; effusion in the abdomen rather less; œdema of legs much less; two to five evacuations in the twenty-four hours; urinary secretion diminished, still albuminous—specific gravity 1004.7, that is, less than natural; soreness in the region of kidney on pressure; no sweating; tongue pale red, shining.

*Prescription.*—Continuetur pilulæ et infusum baccarum juniperi. Omittatur potassæ bitartras.

June 22d. In the night of the 20th was delirious. Last night, slept badly, restless; bowels discharge freely; the evacuations very fetid and dark coloured. The ear discharges a more fetid matter, some of which runs from the mouth.

*Prescription.*—Omittantur pilulæ et infusum. Capiat misturam cretæ pro renatâ.

21st. Is now delirious; desires to get up; urine increased in quantity; strength very much diminished; speaks very slowly; œdema of face and legs the same; dozing constantly; rolling of the eyes; pupils a little dilated, and contract slowly on the application of light; abdomen very tender on pressure; effusion in the abdomen not diminished; percussion of the abdomen gaseous; extremities cold; cold sweats on the face, extremities, and neck; pulse scarcely perceptible, cannot be counted at the wrist; heart 92 pulsations; respiration 15, costal.

*Prescription.*—Ammoniæ carb. gr. iii.; spt. æth. sulph. comp. m. xv.; emulsion. comm. ℥ iss., fiat haustus omni horâ sumendus. Sinapism and bottles of hot water to extremities.

June 22d, P. M. Bowels constantly open; the discharges of a gangrenous odour.

Died at 8 o'clock, P. M., of June 22d.

*Brain* of good consistence and colour, no marks of inflammation. The temporal bone carious; internal structure of ear destroyed; an extensive cancrum aris, which has destroyed a part of the superior maxillary bone, and communicates with the antrum highmorianum.

*Necroscopy, fourteen hours after death.*

*Exterior.*—Emaciated; infiltration of the lower extremities.

*Abdomen.*—About a pint of serum was found in the cavity of the peritonæum, of a light colour; coagulates by heat. *Mesenteric ganglions* nearly all tuberculated; three or four of them, of the size of a pullet's egg: when cut into, of a straw colour, and present the appearance of old cheese; nearly all enlarged.

*Kidneys*—larger than usual; external membrane not adherent; right kidney presenting a mottled appearance, the lower third of a very light colour; when cut into, the cortical substance is slightly granulated in the part corresponding with the light colour externally; tissue firm; left kidney also of a pale colour in spots, and the internal corresponding portion granulated.

*Small Intestine.*—Near the ileo-colic valve a few scattered tubercles. In the lower third, at intervals of two or threei nches, extensive ulcerations from one half to three quarters of an inch broad, and entirely encircling the intestines; presenting a bluish appearance, corrugated, with elevated edges. Some of them correspond to the enlarged ganglion, in the mesentery. In ascending the canal, the ulcerations become fewer and smaller; mucous membrane pale; attenuated glands of Peyer developed, but healthy.

*Large Intestine.*—Liver and spleen normal; several living ascarides lumbricoides in the intestines.

*Thorax.*—Two or three ounces of serum in each pleura; no adhesions of the pleura; no tubercles in the lungs. Bronchial glands extensively tuberculated.

A. M. Vedder.

2.—*Case of Vicarious Menstruation.* Reported by EDWIN A. ANDERSON, M. D., of Wilmington, N. C., one of the Senior Resident Physicians.

H. S., born in Philadelphia, age twenty-two years. An inmate of the asylum for the last four years on account of periodical attacks of insanity, connected with vicarious menstruation. From the age of puberty until that of eighteen, the catamenia were regular; mind clear, with no disposition to insanity. About this period she was attacked with transient and irregular paroxysms of insanity, lasting from a quarter of an hour to an hour, attended with sometimes partial, at other times complete, suppression of the catamenia. The mode and time of these attacks could not be certainly known, either by patient or attendants; generally, however, slight irritability of temper, with a disposition to flushing of the head, face, and neck, with more or less cephalalgia, could be remarked by an attentive observer.

She would be walking about, apparently in good health, conversing cheerfully; when, suddenly falling, she would strike her head against any thing in the way, often severely injuring herself; and, when conveyed to her apartment, would remain entirely insensible to all surrounding objects. The head, face, and neck now became congested of a bright scarlet hue, with coldness of the extremities, and low muttering delirium. This state continued for about ten minutes, when ejection of dark, grumous blood, sometimes to the amount of four ounces, supervened. This was known to proceed from the stomach by the complete absence of the pulmonic physical signs during its ejection—respiration being entirely natural, at times only slightly hurried—and by its dark colour; blood from the lungs being usually of a much brighter hue, approaching to the colour of scarlet, and frothy.

After this the symptoms become entirely relieved; warmth returns to the extremities; the congested head, face, and neck resume their natural hue; and, in from three quarters of an hour to an hour the patient recovers, much exhausted, with a disposition to sleep. Next day she remains entirely unconscious of all that occurred, either during the attack or some hours previous to it; the faculty of memory being for the time suspended. Complete retention of urine precedes and attends most of these attacks, the bladder being greatly distended; with severe pain in the hypogastric region on pressure. Catheterism relieves the pain in the hypogastrium, but has no effect upon the paroxysm: the instrument has often been introduced without her being sensible of it at the time or subsequently. Such was her extreme modesty that some time elapsed before it was discovered that she was suffering under prolapsus uteri to the extent of about an inch and a half. A flat circular glass pessary was then introduced, with relief of most of her distressing symptoms, menstruation becoming regular, and the vicarious menstruation from the stomach ceasing as long as the instrument retained its place and supported the uterus. It was soon, however, dislodged, when the vicarious menstruation, retention of urine, with periodical attacks of insanity, recurred. For more than three weeks a flat circular silver pessary was retained, with entire comfort and ease, and with regular menstruation. It would appear, therefore, that the vicarious menstruation in this case is owing mostly, if not entirely, to the prolapsus uteri; for when the prolapsus is removed, regular menstruation ensues, and if the prolapsus recurs, vicarious menstruation follows, with its attendant distressing symptoms.

E. A. ANDERSON.

## Art. III.—TWO CASES OF BRONCHIAL POLYPUS.

BY JOHN NORTH, F. L. S.,[1]

And Lecturer on Midwifery at the Westminster Hospital School of Medicine.

The term "bronchial polypus" has been quite arbitrarily applied to certain albuminous concretions formed in the air-tubes. As it has, however, been adopted by the few English writers who have described this not very common form of bronchial disease, I retain it; that the cases I am about to relate may not be distinguished merely by a new name from others on record, to which, in every respect they are exactly similar. It may be proper to state, that various designations have been given to this form of disease, by different foreign writers; as angina polyposa, catarrhe suffoquant, asthma rarum, croup chronique des bronches, &c. &c.

Case I.—Mr. B., æt. 21, when about four years of age, had been attacked with severe inflammation of the lungs, from which he completely recovered, after an illness of several weeks. No other trace of this attack remained than a very slight and occasional cough, which did not even excite the attention of very anxious parents. He grew up stout and strong; he was active like other healthy boys, and indulged in the ordinary and violent sports of youth, without shortness of breath or any inconvenience. He continued in good health until the age of seventeen, when his cough became somewhat more troublesome, but not sufficiently so as to prevent him from pursuing an active occupation. He now, also, occasionally expectorated a small quantity of white curdy matter. No increase of these symptoms occurred for a year, when he was quite suddenly attacked with great difficulty of breathing and violent fits of coughing; and for several successive mornings he expectorated a large quantity of substance looking "like a fibrous root with many branches," as his friends, not inappropriately, described these moulds of the bronchial tubes. One of these moulds is on the table, marked 121. He had now some pain in the left side, and could not sleep comfortably when he lay on it. He had no febrile symptoms. In the course of a few days he completely recovered, and he remained perfectly well for two years, having neither cough, dyspnœa, nor expectoration. At the end of this time he was again attacked with slight cough and difficulty of breathing, and, in the course of three or four days, he expectorated many of these "bronchial polypi." As in the former instance, there was no obvious cause for the attack. He had not been exposed to cold, nor had he undergone any unusual exertion. Some of these "polypi" were slightly tinged with blood, in consequence, no doubt, of their firm adhesion to the bronchial membrane. The dyspnœa that accompanied their expectoration was very severe, and one concretion was coughed up with so much difficulty as to threaten suffocation. His breathing had now a whistling sound, and the left side of the chest felt very dull on percussion. For several days his countenance resembled that of a patient labouring under asthma. All these symptoms very quickly ceased, and he has remained perfectly well for more than two years.

Case II.—A delicate-looking boy, æt. 17, had always been subject to catarrhal affections, from slight exposure to changes of weather; but he did not present any symptoms of serious pulmonary disease, nor were the catarrhal attacks ever severe enough to confine him to the house. He was rarely free from a slight cough, but it had not been accompanied by any expectoration. Without any assignable cause, his cough rather suddenly increased, and he began to spit up a quantity of white stringy substance. His breathing now became difficult from slight exertion, and a constant mucous rattling was heard when he breathed.

On the left side, just above the clavicle, the chest sounded very dull on

[1] London Medical Gazette, March 19, 1838, p. 330.

percussion. He was free from pain, and had no fever; pulse remained natural. He continued in this state, with little alteration, for several weeks. The cough then became more frequent, and he suffered very severely from dyspnœa. On the third day from this aggravation of the symptoms, he expectorated, with great difficulty and distress, a well-formed "bronchial polypus" exactly similar in appearance to that in the first case. This preparation is also on the table. For many days he continued to throw up, with violent paroxysms of coughing, similar concretions. Sometimes three or four were expectorated in as many hours; but none were so firm or so complete a cast of the bronchial tubes, as that in the specimen prepared. He quickly rallied from the distress he suffered in expectorating these substances. The cough and expectoration, and râle in breathing, ceased in about ten days, and he was apparently restored to perfect health. The stethoscope indicated a healthy state of the lungs and breathing. He remained well for several weeks, when he was again suddenly attacked in a similar manner, and several "polypi" were again expectorated by violent coughing. This attack entirely subsided in a few days, and for more than a year and a half he has remained quite well. He has grown fat and strong, and is not in any way inconvenienced by variable weather, which he has necessarily been exposed to in traveling.

In the relation of these cases I have purposely avoided a dry detail of slight and unimportant changes; but I hope the brief account I have given is sufficient to render their rise and progress intelligible to those who may not have met with similar cases.

The appearance of these "bronchial polypi" may be briefly described. In form, they are complete casts of many of the bronchial tubes. They are of an opaque white colour, and have more the appearance, I think, of coagulated albumen than of fibrin. The larger branches are much firmer than the smaller ones. Several of the branches, too, are hollow; for I was enabled to inflate them with a blow-pipe, and into some of them a bristle is introduced. A portion that I kept in water for a few days entirely lost the aborescent appearance exhibited in the preparations, and was reduced to a thick mucous-looking substance. Some information may be derived of the nature of these cases of "bronchial polypi" by referring to other cases which my researches upon the subject have furnished me with. In the cases related by John Hunter,[1] Raickem,[2] Warren,[3] Acharius,[4] Dixon,[5] Cheyne,[6] and Iliff,[7] exactly the same ramiform concretions were thrown from the bronchia by coughing. All these cases recovered. In most of them, the patients had laboured under bronchial inflammation; but it is important to observe, that in nearly all, a considerable time elapsed, *after* the subsidence of the bronchial affection, before the "polypous" concretions were formed and expelled. It appears, then, from the cases related by others, as well as those which I have mentioned, neither unreasonable nor unwarrantably speculative to infer, that there existed, as supposed by Andral,[8] "une sorte dé vice de sécrétion, qui *survivait* au travail inflammatoire," which gave rise to the formation of these albuminous concretions. It must, at all events, be admitted, that these polypi are not to be the result of common inflammation of the bronchial membrane, either active or chronic; for if they were, they must be of much more frequent occurrence in various diseases that are accompanied by bronchitis.

[1] On Inflammation, p. 574; with engravings.

[2] Bulletin de la Faculté de Médecine, t. xiv., p. 38: "Sur un croup chronique des bronches."

[3] Med. Trans. of the College of Physicians, vol. i. p. 407.

[4] Med. and Phys. Journal, vol. viii., p. 201.

[5] Case of Angina Polyposa; Duncan's Med. Comment., vol. ix., p. 254.

[6] Ed. Med. and Surg. Journal, vol. iv., p. 441.

[7] London Med. Repository, vol. xviii., p. 20.

[8] Clinique Médicale, 2nde partie, p. 8.

Some difference of opinion exists as to the nature of these concretions. It would be scarcely necessary to advert to the fanciful belief entertained by former writers, as Tulpius,[1] Bartholine,[2] &c., that these substances are the blood-vessels of the lungs which are expectorated, if the same absurd notions were not supported by respectable and much more modern authority.[3] Tulpius, who first advanced this opinion, was himself at a loss to account for the possibility of the pulmonary blood-vessels being thus separated and thrown off, without the immediate destruction of the patient; and he, and his master, Paaw, professor of anatomy at Amsterdam, regarded the fact *ceu miraculum inauditum;* and Planque was equally puzzled, as he states in the Histoire de l'Académie de Chirurgie. The opinion now generally entertained is, that these concretions are owing to an inspissated state of the bronchial mucus, which adheres to the bronchial ramifications; the thinner parts of the mucus being carried off by the constant current of air, and thus a consistent and viscid mould would be formed, of the shape and size of the air-tubes.[4] This was the opinion of Morgagni and Dr. Warren. Dr. Baillie,[5] indeed, differs from them, but not upon very satisfactory grounds; for he does not refer to the necessary supposition that in all these cases there must be some morbid change in the mucous secretion of the bronchial membrane. His only objection is, that the *natural* mucus of the bronchia would not present, when dry, the appearance of these concretions. It has been supposed that these "bronchial polypi" are similar to the adventitious membrane which is formed in croup. But this appears improbable; for croup is very generally, if not always, a disease of early childhood: and nearly all the cases in which these "polypi" have been expectorated, have been in adults. It may be worth remarking, too, that in an inaugural dissertation, published by a German physician by the name of Schmidt, there are some curious experiments, to prove that artificial inflammation excited in the windpipes of animals only produced the adventitious membrane in those very young, whilst every attempt to create it in the old proved abortive. Mr. Porter gives an account of these experiments in his work on the Surgical Pathology of the Larynx. It appears that, first, some change takes place in the mucous secretion of the bronchia, whether from a morbid action of the parts, or from peculiarity of constitution, I do not venture to decide.[6] The mucous secretion gradually becomes firmer, and forms a mould of the part in which it is contained. Thus, both the patients whose cases I have related first expectorated a creamy-looking mucus; then, at times, a stringy and firmer looking substance; and lastly, well-formed and firm "polypous" concretions. In a case which occurred in the practice of Mr. Read, a part of the expectoration is soft, like viscid mucus. Other parts are firmer, but still scarcely forming consistent bronchial polypi. I presume that until the secretion has become firm, so as to block up many of the bronchial tubes, but little distress is occasioned. The process of respiration is not much obstructed. But the violent cough and equally violent dyspnœa come on when the substance contained in the air-tubes becomes firm, and adheres to the bronchial membrane, and forms a serious mechanical obstacle to the act of breathing. Like the membrane of croup, these concretions, which have received the fanciful name of "bronchial polypi," are very quickly regenerated, so that many may be thrown up in rapid succession, and at short

[1] Observationes Medicæ, lib. ii., cap. 3.

[2] Epist. Med. Cent. iii. Hist. 98.

[3] Planque: Bibliothèque Choisie de Méd., t. ix., 1766.

[4] Bretonneau, "Sur la Diptherite," offers many instructive remarks on the various modifications to which the mucous secretion of the air-passages is liable, from various causes.

[5] Works, by Wardrop, vol. ii., p. 88.

[6] We are equally unable to determine with any degree of certainty the altered action that leads to the membranous effusion in tubular diarrhœa, or on the mucous surface of the uterus in dysmenorrhœa.

intervals. Dr. Paris informs me, that a patient of his expectorated, in a short time, enough of these concretions to cover a plate.

Although we find but few cases of bronchial "polypus" on record, it is probable that the number would be much increased if we were more in the habit of minutely examining the state of the bronchial tubes after death; and that, as Andral suggests, many cases of asthma, which are supposed to depend upon some ill-defined disturbance of the nervous system, would be found to result from bronchial obstruction.

Dr. Cheyne[1] directs our attention to another kind of "polypous" concretion of the bronchial tubes, which occurs only in connection with hæmoptysis. The distinction between the two is important with respect to the prognosis. This last variety consists merely of the coagulum of the blood, moulded into shape by the bronchial tubes, into which the blood has been poured. The formation of the coagulum checks the attack of hæmoptysis; but the relief to the patient is but temporary. Cough and difficulty of breathing speedily ensue from the presence of the coagulum in the air-tubes; the coagulum is expelled; the hemorrhage returns, and not unfrequently destroys the patient at once, or he dies of pulmonary consumption. Cases of this kind are related by Mr. Moyle,[2] Dr. Samber,[3] Le Bœuf,[4] &c. On the contrary, when these concretions are voided in chronic affections of the bronchi, the great probability is that the patient will recover, however numerous they may be. It has happened, in more than one case, that the unusual appearance of these polypi has led to the suspicion of pulmonary disease, and that hence an erroneous opinion has been given.

But although the formation of these concretions does not alone indicate organic disease in the lungs, the patient is often exposed to some degree of danger from another source. The "polypous" substances may adhere so firmly to the bronchial membrane, that however violent may be the paroxysms of coughing, they are not expectorated, and suffocation is the consequence. Two instances of the kind are related by Andral,[5] in both of which the patients died from suffocation. Upon dissection a large branch of the bronchia was found completely blocked up by "une masse de mucus concret, demi solide, qui fermait comme un bouchon ce conduit membraneux, et se prolongeait en s'amincissant dans son intérieur." This description corresponds exactly with the appearance of the preparations on the table.

I abstain from entering further into the treatment of such cases than to observe, that the inference to be derived from the rise and progress of the majority of the cases on record, would appear to show that free bleeding is not necessarily indicated. To assist the efforts of nature in throwing off the concretions, small doses of tartar emetic, or ipecacuanha and squills, have been found useful. M. Raickem speaks very highly of the good effects of repeated doses of sulphate of potash. In chronic cases, where the disposition to their formation long continues, I should think it would be proper to endeavour to remove the morbid action, by rubbing in mercurial ointment upon the throat, so as slightly to affect the gums. To alleviate the distressing dyspnœa, the violent cough, and the threatening suffocation that occur, when nature is making violent but ineffectual efforts to remove the too firmly adhering concretions from the air-tubes, warm inhalations of ether and water, and the internal administration of a diffusable stimulus, as Hoffman's anodyne, would be probably more effectual and safer than blood-letting, which some have advised; for all the power of the patient is required to get rid of the mechanical obstacle to the act of respiration.

[1] Edin. Med. and Surg. Journal, vol. vi.
[2] Lond. Med. Journal, vol. vi., p. 252. 1785.
[3] Phil. Trans., No. 398, p. 262.
[4] Mém. de l'Acad. Royale de Chirurgie, t. xiv., p. 449.
[5] Clinique Médicale, part 2, p. 41, *et seq.*

## Art. IV.—ON DISEASES OF THE JOINTS.

The following summary is extracted from the clinical lectures of M. Velpeau on white swellings, reported by M. Gustave Jeanselme.[1]

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It results from all that has been said, that arthropathies can be distinguished without much difficulty from each other by particular signs, and that they are far from requiring the same treatment. Our clinical observations on this subject may be summed up after the following manner:—

White swellings belong to two great classes of arthropathies,—

A. Those of soft parts; B. Those of hard parts. The first class naturally divides itself into three kinds,—1. External arthropathies; 2. Internal arthropathies; 3. Capsular arthropathies. The same may be said of the second class, which presents itself in the form,—1st, Of cartilaginous arthropathies; 2d, Of superficial osseous arthropathies; and 3d, Of profound or parenchymatous osseous arthropathies.

As to their nature, all these arthropathies may be either rheumatic, scrofulous, tuberculous, syphilitic, scorbutic, cancerous, etc., or simply inflammatory.

We may also sum up this subject as follows:—

1. *Extra-capsular Arthropathies.*—Doughiness (*empâtement*), sometimes pain; irregular swelling, without effusion into the interior of the articulation. Generally not serious. Requiring the treatment, either of phlegmonous erysipelas, or of engorgements of the same kind developed in the subcutaneous layers of the rest of the limbs. If a purulent collection is established, the bistoury may be applied with boldness, and without fear.

2. *Pure Capsular Arthropathy.*—Arising from sprains, external violence of every kind, rheumatic affections;—accompanied with pain in certain motions, pain which pressure sometimes augments; giving rise to regular or irregular swelling of the extra-capsular layers; producing sometimes a variable degree of internal effusion; a disease more serious than the preceding; giving origin to many of these which will be referred to; requiring an active antiphlogistic treatment—advantage being derived from resolvent ointments, extensive blisters, compression, and mercury in large doses.

3. *Specific Arthropathy, the blennorrhagic of lying-in women.*—A lesion, which takes place suddenly; soon characterised by an abundant effusion; accompanied only by slight pain in the first degree, and putting on speedily all the characters of acute arthritis in the second; requiring a somewhat energetic, but an evacuant and revulsive rather than an antiphlogistic treatment,—repeated blisters; mercurial frictions; compression; internally, purgatives; calomel in large doses; sometimes, also, anti-blennorrhagic, balsamic substances.

4. *Fungous Arthropathy.*—Sometimes primary; most commonly secondary; always chronic; rarely painful; announced by elastic swellings (*bosselures*), more or less extensive, rolling sometimes under pressure like foreign bodies; giving rise to the idea of fluctuation; sometimes combined with real effusion; giving to the articulation an enormous size, not so as to prevent altogether walking; generally serious on account of its obstinacy; resisting at times all remedial means; never yielding to blood-letting alone; best relieved by large (*monstres*) vesicatories, resolvent ointments, transcurrent cauterisation, moxas, setons, caustics, compression, and calomel in large doses.

5. *Pure Synovial Arthropathy.*—A lesion essentially characterised by an effusion of serum; without pain, or sensible thickening of the articular envelopes; arising suddenly or slowly; only moderately constraining the functions of the articulation; requiring the employment of purgatives, of

[1] Archives générales de Médecine, Sept., 1837.

mercurials in large doses, colchicum or diuretics combined with large blisters and resolvent frictions.

All these shades have the common character of being announced by swelling or superficial pains from the first, and never continuing a long time without changing the form of the part.

6. *Cartilaginous Arthropathy.*—A disease altogether mechanical, which comprises ulceration and contusion of the cartilages, and ulceration of the synovial membrane, or the affection described under this name by Sir B. Brodie; resulting from pressure exerted perpendicularly, or in an oblique direction by the cartilaginous surfaces, against each other; may be compared to the crushing, or wearing away, of inorganic plates; occurring suddenly; announced by a crepitation, and sharp pain, which ceases entirely during rest, and returns in certain motions; may be complicated with osseous arthropathy; healed only after a long time by rest, and great caution in the movements, or in consequence of the subsidence of the cartilaginous rugosities.

7. *Superficiul Osseous Arthropathy.*—A disease the cause of which is most commonly internal; announced by dull pains when the articulation is not moved, causing acute and often intolerable pain when the patient exerts the least motion. In this case the effusion, swelling, fungosities, and the elastic and moveable swellings, only show themselves secondarily. A lesion always dangerous, often incurable; requiring or forbidding general blood-letting, cups, leeches, mercurials, purgatives, according to the state of the patient; a lesion which is only slightly modified by resolvent ointments, blisters and compression; demanding rather the moxa and cauterants, imperiously requiring the most perfect rest; requiring at last amputation, or terminating by anchylosis.

*Profound Arthropathy of the Bones.*—A disease which shows itself by dull and always deep-seated pains, either in walking or at rest; more acute at night than in the day; accompanied with heat; without swelling at first; continues months and years without the least effusion into the articulation; invading sometimes the cartilages of incrustation, and changing itself into an excessively painful affection; extending very often towards the surface of the head of the diseased bone; giving rise then to symptoms of chronic or acute inflammation; proceeding finally like exostoses, accompanied with osteitis; a disease always excessively long, requiring frequently amputation of the limb, only terminating in a happy manner after the elimination or exit of the necrosed or diseased tissues; requiring for treatment internal means especially: repeated blisters, cauterants, moxas also useful; but not admitting compression, and most other topical remedies.

In this last group, that is, in arthropathies of the hard parts, pain, it will be observed, is the dominant symptom as a primitive sign, and it most commonly exists for several weeks, and even months, before there is the least tumefaction.

"This is sufficient, I think," says the reporter, "to show, that the class of diseases known under the name of *white swellings* (*tumeurs blanches*) is composed of an infinity of different lesions, and unless we study them thus in their principal elements, it is altogether impossible to perfect their treatment."

## BIBLIOGRAPHICAL NOTICES.

### *Mutter's Cases of Autoplasty.*[1]

These cases, as the title imports, were originally published in the American Journal of the Medical Sciences, and are now first issued in pamphlet form. Of one of the cases—deformity of the mouth successfully treated—we have already made mention.[2]

The other case is an operation for the restoration of a considerable portion of the right half of the nose.[3] The loss of the original tissue was supplied by sliding a portion of neighbouring integument over the deformity. Union was complete.

When Dr. Mütter last heard from his patient, the nostril appeared natural, but not quite large enough, and there appeared to be a disposition in the part to contract still farther; but he has "no doubt whatever, that in the course of a few months all 'tendency to contraction' will be overcome."

Both operations evince much surgical skill.

By the way we may rationally object to the introduction of the term *Autoplastie*, or rather to its termination. Although used by the French, it is still derived from the Greek, and if adopted by us should be written *Autoplasty;* or, if we desire to be yet more technical, *Autoplastice*,—a term employed by many surgical writers of continental Europe for the operations in question.

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*Laceration of the Iris.*—An interesting example of this lesion has been published by Dr. E. J. Davenport of Boston.

The patient received a violent blow upon the left eye from a fragment of stone. Dr. Davenport saw him soon after the accident, and found upon examination, "an oblique and irregular wound, about four lines in extent, of the inferior and inner part of the cornea; a considerable portion of the inferior and nasal part of the iris, torn from the ciliary ligament, protruded through the wound and hung down upon the eyeball; the anterior and posterior chambers of the eye were filled with fluid blood, so as entirely to conceal from view the pupil and remainder of the iris; the cornea was rendered prominent by the pressure of the contents of the globe, particularly at the wounded part; the ocular conjunctiva was somewhat injected. The patient complained of great pain which he referred to the eyeball; and vision in this eye was extinct, at least for the time being. To prevent any additional irritation from the exposure of the prolapsed iris to the atmosphere and to the friction of the eyelids, it was removed with forceps and curved scissors. A small quantity of bloody serum escaped at the moment from the anterior chamber, after which the edges of the wound were carefully adjusted, and a compress wet in cold water was secured upon the eye with a light bandage. Venesection and an active cathartic were prescribed, together with the antiphlogistic diet and regimen proper to the case. From accidental circumstances, the patient was not seen again until Saturday, when he stated that he had in the mean time been visited by an irregular

[1] Cases of Autoplastie. By Thomas D. Mütter, M. D., Lecturer on Surgery, Fellow of the College of Physicians of Philadelphia, Member of the Academy of Natural Sciences, Honorary Member of the Philadelphia Medical Society, &c. &c. (Extracted from the American Journal of the Medical Sciences.) 8vo, pp. 16. Philadelphia, 1838.

[2] Intelligencer, I., 283, Philadelphia, 1838.

[3] American Journal of the Medical Sciences, for May, 1838.

practitioner of medicine in this city, whose treatment consisted in the external use of the extract of belladonna, and the frequent application to the wounded eye of powders of calomel and white sugar, blown into the eye through a quill! The inflammation had now considerably increased, the vessels of the eye tending to form the zonular arrangement around the cornea, indicative of internal and deep-seated ophthalmia. The pain was severe, though not constant, and was referred chiefly to the brow, temple, and cheek bone; the intolerance of light and lachrymation were moderate. Notwithstanding the high degree of inflammation, absorption of the blood effused in the chambers of the eye had already taken place so far as to allow the superior part of the iris, and a small portion of the dilated pupil, to be seen. The patient reports that he can distinguish the outlines of large objects.

"*Monday.* The process of absorption continues to advance; nearly all the superior half of the iris and pupil is now visible, and the colour of the former is very perceptibly changed from a grayish blue—the natural colour—to a light green. The circumorbital pain has diminished, and the power of vision is improving. Has discontinued the powders, the treatment being confined to the daily exhibition of purgatives and the application of cloths, wet in cold water, on the eye.

"*Wednesday.* Shreds and patches of blood are visible in the pupil, and also red spots scattered upon the surface of the iris; a portion of coagulated blood remains about and below the corneal wound, and at the lower part of the anterior chamber is seen, indistinctly, the accidental pupil, rendered obscure by coagula not yet absorbed.

*Friday, 9th day.* Scarcely a trace of blood remains in the anterior chamber. *The false or accidental pupil presents the appearance of being a continuation or enlargement of the natural pupil, forming with that a large and irregular aperture, by the separation of nearly one half of the circumference or external margin of the iris from the ciliary ligament. A point of the pupillary margin of the iris, of a triangular shape, has become engaged in and adheres firmly to the opaque cicatrix left by the wound of the cornea. The cicatrix forms a point of attachment for this part of the iris, by which the inferior boundary of the natural pupil is in some measure preserved.*

"*Sunday.* The entire pupil is black and transparent, or nearly so; the iris, however, does not manifest any contraction or dilatation upon exposure to different degrees of light. The patient can now distinguish large print with the injured eye, but still complains of an appearance of a haze or mist. Has not had, at any time, muscæ volitantes, nor luminous spectra. In a few days after this visit he was able to return to his work, guarding the eye with a pasteboard shade.

*November 12th.* The wound of the cornea has become firmly cicatrised, the cornea retaining its natural size and convexity. The superior half of the iris dilates and contracts moderately well; the inferior portion being attached to the cornea, is of course without motion. By contracting the lids very slightly, vision is equally as perfect as in the sound eye.

"Three other well-marked cases of laceration of the iris, (says Dr. Davenport,) the result of injury, have fallen under my notice. Of one of these, complicated with opacity of the crystalline lens, I gave an account in a former number of this journal. The second case, when seen for the first time, was accompanied with complete amaurosis, and the iris had nearly disappeared. The third case was that of an intelligent young man—a blacksmith—who was struck by a piece of iron upon the right eye, with such violence that the cornea was ruptured in its tranverse diameter, and a part of the contents of the globe escaped. When the eye recovered from the inflammation, the greater part of the cornea was found opaque, and there was closure of the natural pupil, with obliteration of the anterior chamber, except at the superior margin of the cornea, where a false pupil had been formed by the detachment of the iris from the ligament. Through this pupil he can see large objects pretty distinctly. Luminous

bodies, as the fire or the flame of a candle, to this eye, appear to be greatly multiplied, so that he can at any time amuse himself with an illumination by the aid of three or four common lights. The central image, this patient informs me, is by far the most distinct; those extending horizontally on either side becoming more faint until they cease to make any impression on the retina. It is worthy of remark that within a few months after the above-mentioned accident occurred, the left eye, without any other assignable cause, was attacked with aquo-capsulitis, or inflammation of the lining membrane of the anterior chamber, involving finally the iris. This eye recovered chiefly under the use of depletory remedies, followed with an alterative course of calomel and opium."

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*Mr. Bransby Cooper on Reparation after Simple Fracture.*—Mr. Cooper deduces the following results from an experimental enquiry respecting the process of reparation after simple fracture of bones.[1]

"To sum up in a few words the results of the foregoing investigation, as far as it has been carried, I should say, that the effects of a simple fracture of bone are—first, the effusion of a greater or less quantity of blood; next, the absorption of its serum and red particles: inflammation of the bone, and all the surrounding tissues next takes place: this leads to a deposition of lymph, which soon becomes hardened into cartilages; which, if not different in character, seem, at least, to perform two distinct offices:—that secreted by the cellular membrane of the surrounding soft structures produces, by its hardness and contraction, an approximation or even contact of the fractured portions; and this, proving a fresh source of excitement to the cartilage secreted by the vessels of the bone, leads to its ossification; whilst that thrown out by the soft parts, is, in the end, either absorbed, or converted into a structure the same with that which effused it; showing that the vessels of each part are capable of appropriating their blood to the reproduction of the particular structure from which it was derived.

"It may be well to observe, that, in the prosecution of these experiments, no mechanical means were employed, either to produce or maintain a coaptation of the fractured extremities of the bone; but they were left entirely to the action of the muscles, so that a considerable degree of obliquity or shortening almost invariably occurred. In two or three experiments, the results of which I have not published, I did apply splints for the purpose of preventing motion, so as to enable me to judge of the comparative quickness of re-union; but in each case the animal died, as if the splints had given rise to increased irritation. A very similar result to this I have seen in the fractures of bones of young children; when, by merely placing the fractured limb on a pillow for support, without any application whatever, the union has been more quickly performed, attended with less constitutional irritation, and followed by less deformity, than when these more complicated mechanical aids were used."

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*Effect of Change of Posture on the Pulse.*—The difference between the pulse of the healthy and diseased individual, according as he is in the erect or recumbent posture, is known to all observers. Dr. Guy[2] has endeavoured to appreciate more accurately the effect of posture, and as the result of his investigations he affords the following summary:—

1. In healthy males of the mean age of 27 years, in a state of rest, the number of the pulse is, standing 79, sitting 70, and lying 67; the difference between standing and sitting being 9 beats; between sitting and lying, 3 beats; and between standing and lying, 12 beats. When all exceptions to the general rule are excluded, the numbers are, standing 81, sitting 71, and

[1] Guy's Hospital Reports, No. IV., p. 196; and No. VI., for April, 1838, p 130.
[2] Ibid, No. VI., for April, 1838, p. 107.

lying 66; the difference between standing and sitting being 10 beats; between sitting and lying, 5 beats; and between standing and lying, 15 beats. The same differences, expressed fractionally, are as follows, inclusive of exceptions:—$\frac{1}{6}$, $\frac{1}{3\,0}$, $\frac{1}{6}$; exclusive of exceptions, $\frac{1}{4}$, $\frac{1}{1\,5}$, $\frac{1}{2}$.

2. The extremes are very remote from the mean results. Thus, the greatest difference between standing and sitting is $\frac{1}{4}$, the least $\frac{1}{1\,0}$, of the frequency standing; the greatest difference between sitting and lying is $\frac{1}{4}$, the least $\frac{1}{8\,8}$, of the frequency sitting; whilst between standing and lying, the difference may be somewhat less than $\frac{1}{2}$, and as little as $\frac{1}{1\,4}$, of the frequency standing. The greatest difference observed amounts to somewhat less than $\frac{1}{3}$ of the frequency standing.

3. The exceptions are as follow:—To the general law, that the pulse is less frequent sitting than standing, there is one exception in twelve experiments; to the general law, that the pulse is less frequent lying than sitting, there are three exceptions in ten experiments; to the general law, that the pulse is less frequent lying than standing, there is one exception in fourteen experiments. The total number of instances in which one or more exceptions to general rules occurs, is thirty-four, or somewhat more than one in every three.

4. The effect produced by change of posture increases as the frequency of the pulse increases.

5. The exceptions to the general rule are more numerous as the pulse is less frequent.

6. The effect produced upon the pulse by change of posture is due to muscular contraction.

7. Muscular contraction, whether employed to change the position of the body, or to maintain it in the same position, accelerates the pulse; and the effects produced by change of posture form but a particular case of this more general law.

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*Treatment of Cancer in South America.*[1]—Dr. Germont, in his travels in Brazil, speaks of a method of treating cancer adopted by the native physicians of that country, particularly in the vicinity of the river Amazon. The ulcer is surrounded with a plaster, and the juice of the manzanillo, a species of euphorbia, is poured upon it. This in a short time, if at all, produces sweating, dyspnœa, involuntary discharge of urine, &c. A slough forms, which after some days falls off, and leaves behind healthy granulations. Dr. G. saw several cancers of the breast, and the case of a Spanish general, which European treatment had failed to relieve, cured in this manner. This juice, combined with pus, is fatal to animals; but when mixed with the discharge from cancer is perfectly harmless, if report says true.

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*Necroscopy in Small-pox.*[2]—In a patient who died of confluent small-pox, the following appearances presented themselves on examination:—The body had a sour smell: the face was black; a serous fluid in the pocks; much blood in brain. Fauces of violet colour, studded with eruption; tonsils small. Pharynx with membranous granulations, spots; mucous membrane wrinkled, soft, pocked, red streaks between the wrinkles. In the œsophagus near the cardiac orifice pale red small knots; mucous membrane of the pharynx rough with small flat pustules, that of the trachea brownish red, covered with mucus. Red spots and points in stomach; mucous follicles near pylorus confluent; duodenum similar to stomach. No redness in small intestine below; the follicles swollen; cœcum bluish; kidneys soft.

[1] Zeitschrift für die gesammte Medicin. Jan., 1838.
[2] Esteinne's Recueil, Paris, 1837.

*Case of Dropsy.*[1]—A patient of M. Borgialli, previously thin, became, in her thirty-third year, suddenly corpulent. After this, from grief and watching, loss of flesh again succeeded, followed by dyspepsia, and finally by dropsy. She was tapped for the first time in 1829, and one hundred pounds of water drawn off. The same operation was repeated during the year with a similar result. She continued to be tapped at shorter intervals, until, in 1834, the forty-fifth operation was performed. Meanwhile, by the free use of evacuants and diuretics, a powerful impression had been made on the disease, and the menstruation, returning after a long interval, appeared to prove critical. At all events, the patient recovered her health after the enormous amount of four thousand five hundred pounds of water had been withdrawn by the trocar!

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*Treatment of Hooping Cough by Carbonate of Iron.* By Dr. Steyman.[2] Dr. Steyman employs carbonate of iron in hooping cough in the dose of half a grain (at the least), to be taken every three hours with sugar, and increased to as many grains, and more, than the number of years of the child's age. It is only to be used in cases which are well marked, and should not be administered in the first stage; in all cases it must be preceded by an emetic.

Henry L., aged 11 years, had suffered for more than nine weeks with hooping cough which had baffled all means; he was ordered the following: R. Carbon. ferri, gr. xxv.; sacch. alb., ʒ ii. M. Fiant pulv. decem. One powder every three hours.

After its employment, the cough became less frequent, and the hooping sound had completely disappeared; ten other powders, each containing five grains of the carbonate of iron, cured the disease entirely.

His sister, aged 5 years, affected during the same period, and having taken the ordinary medicines without relief, began with nine grains of the carbonate of iron, then fifty-four grains, and was completely cured at the termination of eight days.

Jules Etier, aged five years, after having been unsuccessfully treated by another physician, was placed under the care of M. Steyman; he prescribed two grains, then four grains, of the carbonate of iron for a dose. At the end of four days the patient was perfectly cured.

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*Efficacy of Chloride of Zinc in Chronic Blennorrhœa, &c.*—M. Bureaud-Riofrey, in a letter read before the Académie Royale de Médecine, at the sitting of the 31st October, 1837, says, that he has employed the solution of chloride of zinc in certain fetid discharges, which could not be considered as leucorrhœal; the fœtor disappeared, and the discharge was diminished, but not entirely suppressed. Applications of chloride of zinc in solution, in the quantity of from five to ten grains to the ounce of water, may render, he thinks, much benefit in the treatment of atony of the mucous membranes, with or without the secretion of purulent matter. The chloride of zinc has a great advantage over the chloride of lime in possessing no odour.

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*Jefferson Medical College of Philadelphia.*—Under the new charter and organisation of this institution, to which we referred in a former number of the "Intelligencer,"[3] all the officers ceased to exist as such, except the old trustees, who were continued by the new charter. It became, therefore, necessary to appoint professors to the vacant chairs. All the former professors were, accordingly, unanimously re-elected.

[1] Bulletino delle Scienze Mediche di Bologna, August, 1837.
[2] Medicinisches Correspondenz Blatt, and Gazette Médicale de Paris, Jan. 20, 1838.
[3] For May 1, 1838, p. 48.

Important changes are about to be made in the college building. The exterior of the Hall will be remodeled; the lower lecture-room be thoroughly changed; a convenient laboratory be provided for the professor of chemistry; and by the commencement of the ensuing course, the whole of the interior of the building will be so arranged that the student may reap every advantage from the lectures.

At no time, we learn, have the prospects of the institution been more flattering.

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*Medical College of Ohio. Dr. Mussey.*—Dr. Mussey, who has so long lectured with credit to himself, and advantage to his pupils, at Dartmouth College, is about to transfer his useful exertions to another theatre. He has accepted the professorship of surgery in the medical College of Ohio, which cannot fail to be largely benefited by the transfer.

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*Medical College of Richmond, Va.*—The trustees of Hampden Sidney College, having organised a medical department in the city of Richmond, Va., lectures, we learn, will commence there on Monday, the 5th of November, 1833, and will be continued until the last week in March.—A hazardous experiment, by the way, in a new institution to attempt to extend the usual length of the medical session.

We have not a list of the professors: as soon as we receive one we will publish their names.

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*Transylvania Medical School. Dr. N. R. Smith.*—We learn that Dr. N. R. Smith, of Baltimore, has accepted the Chair of Theory and Practice of Physic in this school: but that he will continue to reside in Baltimore except during the winter session.

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## BOOKS RECEIVED.

Die neuern Arzneimittel; ihre physischen und chemischen Eigenschaften, Bereitungsweise, Wirkung auf den gesunden und Kranken Organismus und therapeutische Benützung nebst einer auswahl von Arzneiformeln. Von V. A. Riecke, Doctor der Medizin, correspondirendem Mitglied des Vereins für Heilkunde in Preussen und des Vereins Grossherzoglick Badischer Medizinalbeamter zur Beförderung der gerictlichen Arzeneikunde, und ordentlichem mitglied des Würtimb. ärzlichen Vereins. 12mo, s. 477. Stuttgart, 1837.

*From the Author.*—Cases of Autoplastie. By Thomas D. Mütter, M. D., Lecturer on Surgery, Fellow of the College of Physicians of Philadelphia, Member of the Academy of Natural Sciences, Honorary Member of the Philadelphia Medical Society, &c. &c. (Extracted from the American Journal of the Medical Sciences.) With two plates. 8vo, pp. 16. Philadelphia, 1838.

*From the Author.*—An Essay on the Relation between the Respiratory and Circulating Functions. By Charles Hooker, M. D. Read at the Annual New Haven County Meeting of the Connecticut Medical Society, April 12, 1838. Republished from the Boston Medical and Surgical Journal. 8vo, pp. 47. Boston, 1838.

Circular of the Louisville Medical Institute. Second session. 8vo, pp. 8. Louisville, 1838.